

AIR FORCE HISTORY



BUILDING AN INSTITUTION: THE CONSTRUCTION OF THE US AIR FORCE ACADEMY

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What was the first Air Force installation constructed by the Air Force?
Answer: The US Air Force Academy at Colorado Springs, Colorado.

Air Force leaders had lobbied for a separate Air Force Academy to educate young people for service as Air Force officers and leaders since 1947. Their efforts came to fruition on 1 April 1954, when President Dwight D. Eisenhower signed Public Law 325, authorizing the establishment of an Air Force Academy. The law authorized the appropriation of \$126 million for construction of the institution. It also gave the Air Force full responsibility for the Academy's construction.

SITE SELECTION

Many areas vied for selection as the permanent home of the new Academy, but a Site Selection Commission narrowed it down to three possible locations: Lake Geneva, Wisconsin; Alton, Illinois; and Colorado Springs, Colorado. After numerous surveys and engineering studies, Secretary of the Air Force, Harold E. Talbott, announced in June 1954, that a 15,000 acre site north of Colorado Springs had been selected. He also announced that while construction at the new site was underway, the interim site for the first three classes of cadets would be Lowry Air Force Base, Colorado. The Academy would move to its permanent site in 1957.

AIR FORCE ACADEMY CONSTRUCTION AGENCY

To oversee this high-profile project, the Air Force created a new organization, the Air Force Academy Construction Agency (AFACA). Established on 1 June 1954, the AFACA was assigned to the 1130th USAF Special Activities Group, 1020th USAF Special Activities Wing, Fort Myer, Virginia, for administration, with operational control vested in the Assistant Chief of Staff, Installations, HQ USAF. The Agency's mission was to "direct the planning, designing, and construction of an Air Force Academy and to simultaneously assist in the provision of facilities for the interim Academy." Colonel Leo J. Erler became the first AFACA Director. In October 1954, 15 military and 58 civilians had been authorized, but this soon increased to 19 military and 110 civilians, working out of two offices--Washington DC and Colorado Springs.

PREPARING A DESIGN

The acquisition of the desired real estate proved to be a lengthy process. The State of Colorado established the Colorado Land Acquisition Commission to acquire land and rights thereto for the Academy site. The Legislature authorized \$1 million for the acquisition of land by purchase or condemnation for subsequent donation to the Federal Government. The Air Force would cover any additional costs.

More than 300 architect/engineer (A/E) firms expressed interest in the Academy project. A board of key officers and civilians reviewed the proposals and listened to personal presentation from numerous companies. On

15 August 1954, Secretary Talbott selected Skidmore, Owings and Merrill of Chicago, Illinois, as the A/E for the Academy.

AFACA personnel set out to develop requirements to serve as a guide for the design and construction of the Academy. Members of the Agency and A/E representatives made numerous visits to other institutions of higher learning, including the United States Military Academy and United States Naval Academy, to gather information that would serve as a guide in planning the facility.

On 14 May 1955, Skidmore, Owings and Merrill made a public presentation of the Academy's architectural concept. In attendance were more than 100 members of the media and more than a dozen congressmen and senators. The A/E showcased the artist's conception and a scale model at the Fine Arts Center in Colorado Springs. Some 25,000 people viewed the exhibit during the month it was on display. Clearly, it had caught the public's interest. Comments on the design were generally favorable. However, the official history notes, "the model representing the cadet chapel stimulated some criticism." The excessive use of glass in the Academy's design even prompted the House of Representatives to remove any fiscal year 1956 funding for the construction until the design could be further reviewed. Fortunately, the Air Force presented a

revised design to Congress before final passage of the appropriations bill and \$20 million was appropriated.

WORK BEGINS

The Air Force began to award contracts for utility and road construction in 1956. This included construction of three potable water reservoirs and a 400-foot tunnel through the Rampart Range as part of a potable water supply system.

ACADEMIC BUILDINGS BEGIN TO TAKE SHAPE

As the work progressed, it became clear that the original design and construction schedule agreed to by the A/E and AFACA was completely unworkable. After a lengthy analysis of the situation, all parties agreed to a revised schedule. However, this meant postponement of the Academy's opening until 1 September 1958.

The unspectacular, yet all-important work on roads and utility systems continued throughout 1956. Graders carved roads into the timbered mountainsides. New water lines and sewer mains formed an underground network throughout the site. Land acquisition neared completion as the final few tracts were acquired through condemnation. Of course, people sought to take advantage of the situation. One local businessman had paid \$27,000 for a 133-acre tract in 1954. Two years later, he asked the court to award him \$423,000 for 101 acres needed for the Academy. The court awarded him \$65,832.

The Secretary of the Air Force approved the final exterior design for almost all buildings in the academic area in March 1956. No definite design for the chapel had been selected, but its general size and location were approved. The new plan called for the chapel to be placed among the group of academic buildings, rather than on an isolated hillside as first proposed. The Secretary approved the final design of the chapel in May 1957, after receiving the joint approval of all his consultants.

The Academy was designed for a cadet wing of 2,500, although the initial number would be much less. The key buildings

Academic buildings begin to take shape.



included a dining hall, cadet quarters (Vandenberg Hall), academic complex (Fairchild Hall), administration building (Harmon Hall), theater (Arnold Hall), physical education facility, and chapel. In addition, 1,200 family housing units (650 enlisted and 550 officers) under Title VIII Capehart were planned.

The pace of construction grew rapidly and by mid-1957, 2,400 people were working on the site. This grew to a peak of 5,500 in mid-1958.

INNOVATIVE CONSTRUCTION

Unusual construction methods were put into operation when work on the six prestressed girder bridges was begun in 1957. The girders, 120 feet in length, and weighing approximately 97 tons, helped create one of the longest spans for railroad bridges in the United States.

The cadet dining hall featured a unique 1,150-ton roofing system. The roof is supported on 16 columns with a 266-foot span between columns. Including overhang, the roof is 308 feet square. Workers assembled and welded its 12-foot deep trusses on the dining hall floor slab. The roof then was raised using the concrete lift slab method. It was reported to be the first time such a procedure was used on such a large steel structure.

OBSTACLES

The contractors faced numerous obstacles as they worked to meet the 1 September 1958 deadline. As is typical of Colorado, the weather did not cooperate as 1957 was one of the wettest years in the region's history. Precipitation totaled 25.07 inches compared with a normal annual reading of 14.26 inches. The high public interest meant lots of visitors, both official and unofficial. An estimated 125,000 people visited the construction site in 1957 alone. A five-week steel strike caused delays in delivery of steel columns and girders.

THE DEADLINE NEARS

1958 was the busiest year as AFACA directed its efforts toward the "completion of sufficient facilities by September 1958 to permit the commencement of operations on the permanent site of the US Air Force

Academy." On 1 January, the value of the completed construction work stood at \$60 million. Six months later, this reached \$90 million--an average of \$5 million per month. On 31 December, this was up to \$108 million.

During 1958, work on the key academic area structures was the focus of concern for AFACA. Buildings such as the cadet quarters, academic complex, science building, cadet dining hall, road paving, and support personnel facilities were completed or nearly completed by the end of the year.

Gradually, AFACA turned responsibility for the facilities to the Academy. In early 1957, the Academy's 7625th Support Squadron was activated and commenced operation at the permanent site. The unit began receiving and storing supplies and equipment and the maintenance and operation of the permanent site facilities. On 30 June 1958, command jurisdiction of the permanent site was transferred to the Academy superintendent. Also, AFACA's contract with the General Services Administration for security and fire protection on the site was terminated and the Academy assumed these responsibilities.

THE CADETS MOVE IN

Labor Day weekend, 1958, was a memorable day for the Air Force and especially for the Air Force engineers who had worked on the project since 1954. During that September weekend, the cadets officially arrived at the new site from the interim Academy at Lowry. But the work was not finished. The cadet physical education complex, hospital, housing, and cadet chapel remained incomplete.

CHAPEL

As the work wound down and the contractor continued to put on finishing touches, such as landscaping, the chapel remained an area of controversy. A bid opening was held 21 July 1959 and AFACA awarded a contract for \$3.3 million to Robert E. McKee, General Contractor, Inc., for construction of what was to become the dominant feature of the Academy campus--the chapel. Work began in September 1959, but was plagued by defective aluminum panels for the roof and a steel strike. Some

interior work, financed by Chaplain's Funds, had to be rescheduled to coordinate the construction sequence.

THE ACADEMY'S RENOWNED CHAPEL BEGINS TO TAKE SHAPE

AFACA extended the contract 97 days and the beneficial occupancy date was scheduled for 31 December 1961, then February 1962, then 17 March 1962. Construction deficiencies in the weathertightness of the building delayed the final acceptance of the building. Dedication services had been originally scheduled for 29 July 1962. After extensive reviews of the proposed fixes, a firm remedy against water penetration into the chapel was determined and a change order in the amount of \$237,550 was negotiated with the contractor. Formal dedication was held on 22 September 1963.

MISSION COMPLETE

AFACA began to decrease commensurate with the construction work. From its high of more than 120 personnel, AFACA shrunk to eight civilians and nine military by mid-1961. The remaining personnel closed out projects and completed as-built drawings and operations and maintenance manuals for the last few buildings and landscaping work. The Bradford Building, AFACA's home in Colorado Springs since 1954, was slowly turned over to Air Defense Command.

During the initial construction phase, more than 100 major building contracts had been completed. The total surveyed acreage within the Academy site was 18,514 acres, including 632 acres of right-of-way land. The total surveyed acreage purchased within the Academy site was 17,882 acres. Final total cost of the academy was approximately \$141.797 million. With their mission complete, AFACA inactivated on 30 June 1962.

Work proceeds on the Academy's renowned chapel.

